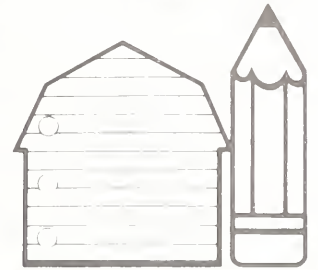


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Ag in the Classroom

United States
Department of
Agriculture



Notes

A bi-monthly newsletter for the Agriculture in the Classroom Program. Sponsored by the U.S. Dept. of Agriculture to help students understand the important role of agriculture in the United States economy. For information, contact: Shirley Traxler, Director, Room 317-A, Administration Bldg., USDA, Washington, D.C. 20250-2200. 202/720-5727

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New Minnesota School Focuses on Agriculture

One of the biggest challenges teachers face is helping students see how their school learning relates to their daily lives. In Delavan, Minnesota, a small rural community, an entire school is devoted to incorporating the theme of agriculture throughout the curriculum. The Delavan Agri-Science Elementary School, the state's first agricultural magnet school, builds on the community's strong agricultural foundation.

Last year, the school wanted to apply for a grant to promote innovative education. The proposal asked schools to focus on their area of strength. "Almost everybody in our school is connected with agriculture," says Kate Warmka, a third grade teacher at the school. "Focusing our school on agriculture was a logical step for us."

The school won the grant and has begun to incorporate agriculture throughout the curriculum. Chris Volz, the superintendent/elementary principal, notes that agriculture is not used in every lesson. "But we do incorporate agriculture where we can because it makes the learning more relevant to our children."

The math curriculum has been one of the first to incorporate agricultural themes. All students in grades 1-3 and 4-6 are scheduled for math at the same time. They work in multi-age groups, with other students who are at their skill level. These multi-age groupings make it possible for teachers to meet the needs of all students—from those who

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Illinois Video News Magazine Takes Agriculture into the 90's

It can be hard for today's generation of "vid kids" to understand that agriculture has moved into the age of technology. "It's important for students to understand some of the basics about agriculture—where food comes from, what a farm is like," says Ellen Culver, state contact for AITC in Illinois. "But we also want them to understand some of the ag-related topics that are very much a part of life in the Nineties."

To meet this need, the AITC program and the Illinois Farm Bureau have produced "Illinois Agriculture Today," a video magazine that describes itself as "a news magazine for kids ... by kids." The news announcers and reporters, all children themselves, discuss a variety of stories

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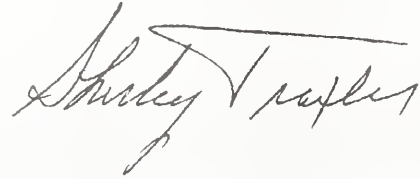


From the Editor:

In his address to the 1991 National Ag in the Classroom Conference, Ramon Cortines, Superintendent of the San Francisco Unified School District, said, "Probably the greatest thing that is going to change in our educational system in the next decade is not the curriculum, but the partnerships that we forge. The professional teacher is not the only teacher. The parent, as the first teacher, and the specialist, that many of you are, have just as much to offer as I do as a professional teacher."

Many of you are realizing through your work in Ag in the Classroom that you do, indeed, have a

great deal to offer, and that this is an exciting time to be involved in agriculture and education. Through your skill and dedication, millions of youngsters are gaining knowledge about the food and fiber system that will help them to become wiser consumers and better informed citizens who will be supportive of sound agricultural policies and practices.



Shirley Traxler

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New Minnesota School Focuses on Agriculture

need extra help to those who need extra challenges. According to Volz, the groupings change from unit to unit. "It's a lot of hard work for teachers," she points out, "but the results are worth it."

Agriculture shows up in other subject areas as well. First graders bake muffins after they have talked about the importance of eating nutritious

foods. Fourth graders are growing their own salad ingredients. Third graders are growing soybeans. (See "Spotlight" on page 3.)

Like many small communities, Delavan recently had to close its high school. "But," says Volz, "we are determined to keep our elementary school." Under Minnesota's open enrollment plan, students from other districts may enroll in the Agri-Science school.

"Community support for the school," says Al Withers, state contact for AITC in Minnesota, "has been outstanding." Community volunteers serve as classroom resources. Others are working with teachers to develop a five-year plan for the school. Local businesses have contributed financial and in-kind support.

But the greatest show of community support came on the day the new school was dedicated. "Although the dedication took place on a Sunday afternoon," says Warmka, "virtually every child—and all their parents—showed up."

How many scoops of soybeans in a liter?



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Illinois Video News Magazine Takes Agriculture into the 90's

that give students and their teachers a deeper understanding of contemporary agricultural issues.

For instance, students learn how new technology has developed a plastic material for packing that is completely biodegradable. In another segment, a young reporter visits an Illinois farm to learn how farmers protect the environment.

"Video is something kids respond to," says Culver. "Slides and overhead projectors don't work anymore. This generation is tuned in to video."

The video program is fast-paced to keep students' attention throughout. It even includes some "kid-on-the-street" interviews, asking what students know about agriculture today. In the

concluding segment, a farmer changes hats to help students see all the different roles today's farmer fills.

Students who appear in the video, all of whom have previous performing experience, were chosen to reflect the diverse population of the state. "Teachers in urban areas have told us their students need positive role models," Culver says. "We selected students with the diversity of our state population in mind."

The program was originally conceived as a one-time activity. "But because teacher response has been so positive," Culver says, "We're thinking of producing a second edition later this year."

Spotlight

Minnesota Teacher Teaches The Facts of Farm Life

"Kids don't like to learn just by reading," says Kate Warmka, a third grade teacher at Delavan Agri-Science Elementary School in Minnesota. "They learn much more by actually doing." To help her students understand the facts of farm life, Warmka has her students plant and harvest a crop of soybeans. Her unit recently was awarded a mini-grant by the Minnesota Ag in the Classroom program.

Warmka, who acts as the banker, loans each student \$2,000 at the beginning of the project. They use that cash to buy land (with sandy soil selling for a lower price than the richer soil), crop insurance, herbicides, and fertilizer.

Students plant soybeans in dishpans filled with the soil they have purchased. Each day, they draw a weather card to determine how much, if any, rain their crops get. Students who have purchased the sandy soil quickly learn that they need more rain than their neighbors. Sometimes, students draw a card that calls for frost. In that case, says principal Chris Volz, "We put the dishpans outside and let Mother Nature do the rest."

Each student keeps a daily log of activities. "This teaches students that farming is a business and requires careful record keeping," says

Warmka. "The logs boost writing skills," she says, "and help me see how much they're learning."

The project also helps students put math skills into practice. They figure the cost of land per acre and calculate the interest they must pay the bank on their loans.

At the end of the project, a farmer visits the classroom and helps students determine their yield per acre. Then the students take their harvest to the elevator and sell their crop. "At that point," Volz notes, "they learn they haven't made any money because of the cost of purchasing their land."

The Delavan school is organized around the idea of outcome-based education—a belief that every student can learn, although at different paces. Warmka says that after the unit is completed, "I am delighted that the students have achieved the outcomes I established at the beginning."

In the past, Warmka taught math by having students read books and answer problems on worksheets. Now, she believes, "they're much more involved with their learning. They're eager to come to school every day. It's made our classroom an exciting place for them ... and for me."

"Kids don't like to learn just by reading, they learn much more by actually doing."



One third grader in Kate Warmka's class is taking out a loan to buy his farm. Other students are working on their record books

Ag Day Materials Ready

This year, posters and other materials for National Agriculture Day have been made available in November. "The early publication should help grass roots groups promote and plan activities for Ag Day in local communities," says Margaret Speich, Director of Public Relations for the Agriculture Council of America. Ag Day 1992 is scheduled for Friday, March 20 as the culmination of National Agriculture Week, March 15 - 21.

This year's Ag Day poster is the fifth in a series by artist Bart Forbes. The 1992 poster, available for \$3.00, features a scene from a farmer's market. "This poster brings the consumer and the farmer together," Speich notes.

The Agriculture Council of America has also revised Ag Day information kits. "We hope the kits will provide local Ag Day organizers with a lot of user-friendly information," Speich said. The focus

of this year's kit will be on working with community newspapers to promote agriculture. The kit includes sample news releases, editorials, and a speech that can be given to farm or non-farm audiences. It also features several items of particular interest to teachers, including word finds, crossword puzzles, a brief history of agriculture, and famous quotes about agriculture. A guide outlines a suggested procedure for planning and implementing local Ag Day activities. Kits are \$3.00 for single copies, and bulk order prices are available.

For more information or to order the poster or the information kit, contact Rita Salaszek, Information Division, Agriculture Council of America, 1250 I Street, Suite 601, Washington, DC 20005 or call (202) 682-9200.

Bart Forbes' depiction of a farmers market is featured on this years National Ag Day poster.

AMERICANS AND FOOD—A QUIZ TO TEST YOUR KNOWLEDGE

1. What food showed the largest percentage gain in consumption over the past 20 years?

- a. Yogurt
- b. Low-calorie sweeteners
- c. Broccoli
- d. Lowfat milk

2. Cheddar is America's favorite cheese. What's No. 2?

- a. Swiss
- b. Mozzarella
- c. Parmesan
- d. Provolone

3. What's America's favorite fresh fruit (on a pounds-per-person basis)?

- a. Bananas
- b. Apples
- c. Oranges
- d. Strawberries

(Correct answers: c, b, a)

—From the Ag Day Information Kit

Iowa State Fair Booth Invites Kids to "Dig In"

A trip to the State Fair offers the promise of fun for the entire family. But sometimes, parents find little that appeals to their youngest children. That can lead to boredom, whining, or a premature visit to the midway.

So when the Iowa Foundation for Agricultural Awareness (IFAA) designed a booth for the Iowa State Fair, the group decided to develop a booth especially for young children. In the process, says Executive Director Dynette Mosher, they also educated thousands of parents. "We hoped that by attracting young children, we could also create an awareness of agriculture with their parents," says Mosher.

The booth featured a 5' x 5' wooden box, similar to sand tables used in many preschools. This box, however, was filled with shelled corn and soybeans. IFAA consulted with a child development specialist at Iowa State University to ensure that the box was the right height for preschoolers ... and was wheelchair-accessible.

The young children who visited the booth found that it was a real hands-on affair. They scooped grain into wagons, elevated it into bins, and hauled it to market with tractors. The tractors and implements were donated by the Ertl Company, an Iowa-based toy manufacturer.

Two sand tables were available for children to plow, disc, drill grain, combine, and operate a skid loader. Model farms, complete with dairy cattle,

beef cattle, hogs, chickens, and horses, helped youth learn about the livestock industry. A white picket fence and a child-size mailbox completed the homey atmosphere.

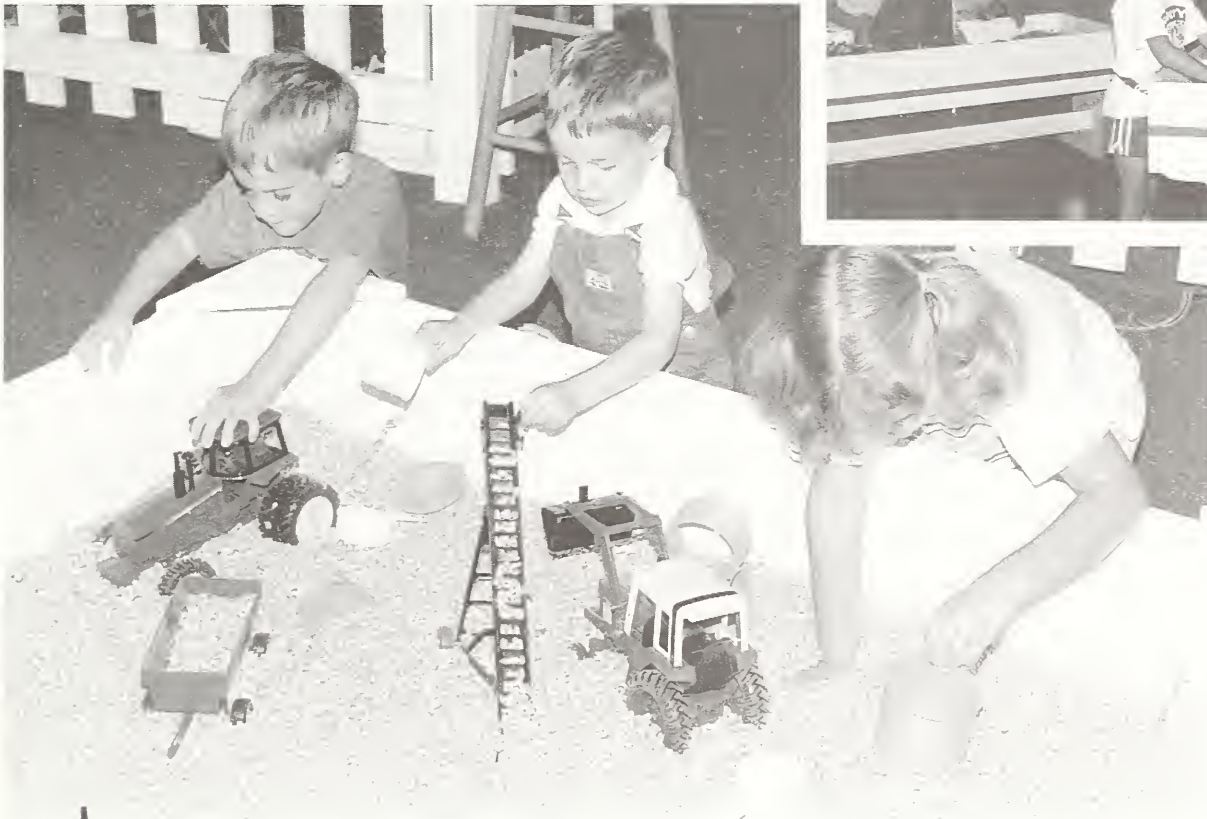
Iowa commodity organizations provided agricultural take-home activity sheets, pencils, and balloons. The groups, along with Iowa agribusinesses, also provided the 50 volunteers needed to staff the booth.

Children—more than 7,000 during the Fair—loved the exhibit. So did their parents. Volunteers reported that parents were delighted their city children had a chance to feel soybeans and corn for themselves. They often said, "This is what Grandpa grows on his farm," or "Uncle Al drives a tractor like this."

Although the fair is long past, Mosher says, it is still having an impact. "We continue to get calls from teachers who have heard about the booth from a student who visited the fair."



As students scooped corn and soybeans, they learned about agriculture at the Iowa State Fair.



USDA Scientist Protect, Preserve Plants From Around The World



Each year, USDA sends scientists from the Agricultural Research Service (ARS) to the most distant corners of the globe to collect plant species before they become extinct. The plants these explorers have collected, says an article in the July 1991 issue of *Agricultural Research*, have literally changed the face of agriculture and gardening worldwide.

"Genetic diversity is the key to maintaining and improving agriculture, whether it's discovering new crops or finding the genes for resistance to diseases and insects, drought tolerance, better flavors, durability, or some other needed traits to be added to crops already being grown. What plant explorers do is find and bring back that diversity," says Calvin Sperling, the current head of ARS' Plant Exploration office.

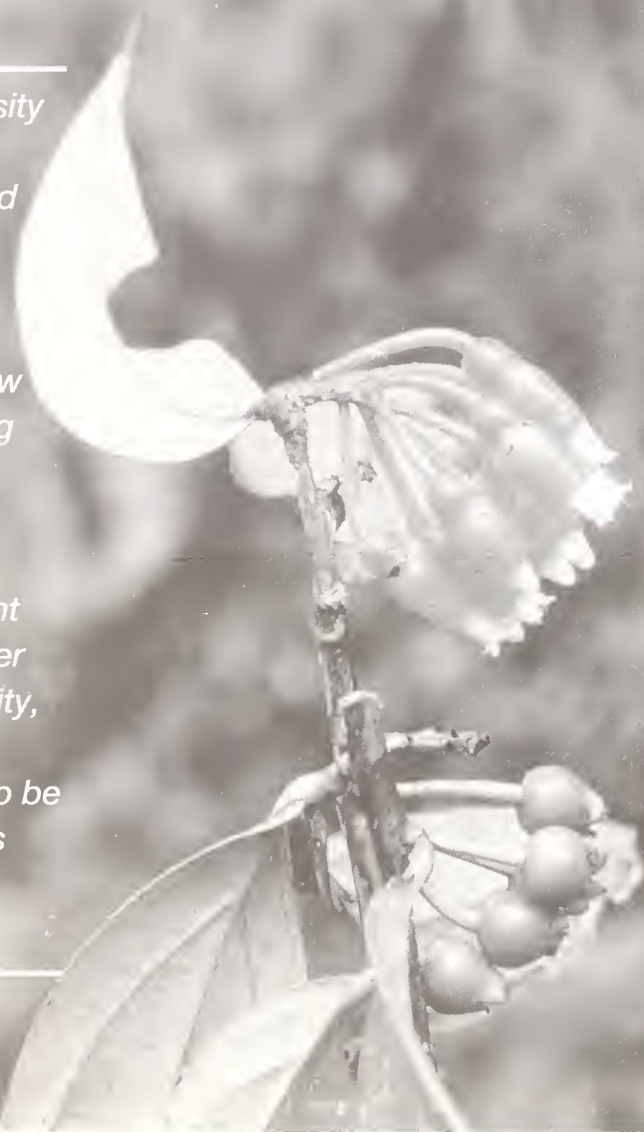
The need for plant collecting has become more urgent as plants are lost to the encroachment of modern civilization—either through the destruction of habitat or as traditional varieties grown by remote peoples are replaced by commercial varieties, Sperling points out. "We don't know what genes those traditional varieties may have."

At the same time, there are many plants whose uses are as yet unknown. Richard Schultes, a prominent plant explorer for USDA in the 1940's and 1950's, points out, "There are over 1,600 species of plants used for medicinal purposes alone by people in the Colombian Amazon and only a few of them have ever been looked at by scientists. Yet there is the destruction of millions and millions of acres each year, and plants are being lost. We need to learn what plants are out there and what they can do for us in agriculture and medicine."

At times, the seeds collected by USDA scientists on their expeditions are stored in a gene bank, where they are accessible to scientists. In other cases, wild species are sometimes catalogued and left in place.

"Gene banking is costly," Sperling says, "and requires a long-term commitment to preserve seed from what is collected and then grow it out periodically to maintain viable seed supplies." Individual copies of the July 1991 issue of *Agricultural Research* are free to teachers. For a copy, write to the Editor, *Agricultural Research*, Room 316, Bldg. 005, BARC-West, 10300 Baltimore Blvd., Beltsville, MD 20705-2350.

"Genetic diversity is the key to maintaining and improving agriculture, whether it's discovering new crops or finding the genes for resistance to diseases and insects, drought tolerance, better flavors, durability, or some other needed traits to be added to crops already being grown."



North Dakota Calendar Features Student Art

"Agriculture is Awsome!" headlines one piece of student artwork in a new calendar being distributed throughout North Dakota. Although the young artist is better at drawing than he is at spelling, his drawing captures the spirit of a vital and important industry in the state.

The calendar was compiled by the North Dakota Farm Women's Committee. County Farm Bureaus from across the state asked school-age children to submit pencil drawings relating to agriculture. Blue ribbon winners, as well as honorable mention drawings, have been collected in a 16-month calendar.

The calendars will be distributed through the state Farm Bureau office and at various activities in the state.

September 1991 - December 1992

Sixteen month Calendar

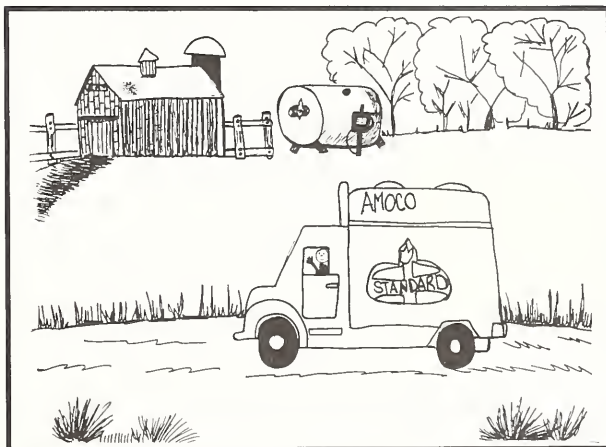
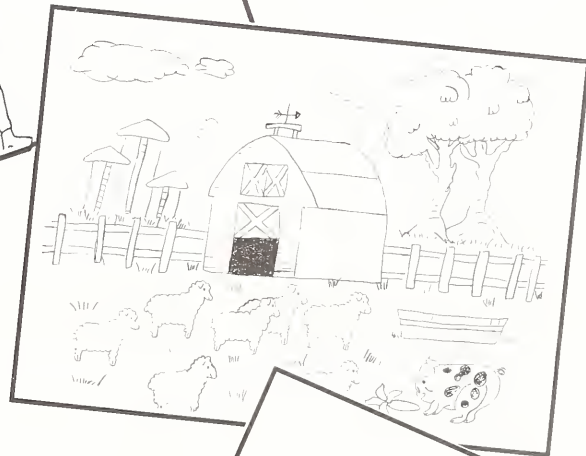
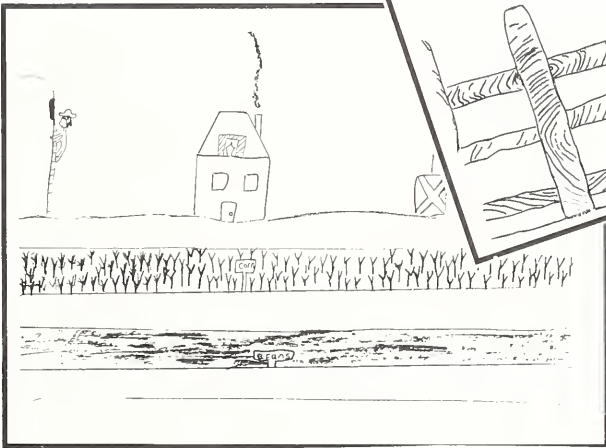
Agricultural Line Drawings

by

North Dakota
School Children



A product of the North Dakota Farm Bureau Women's Committee



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